

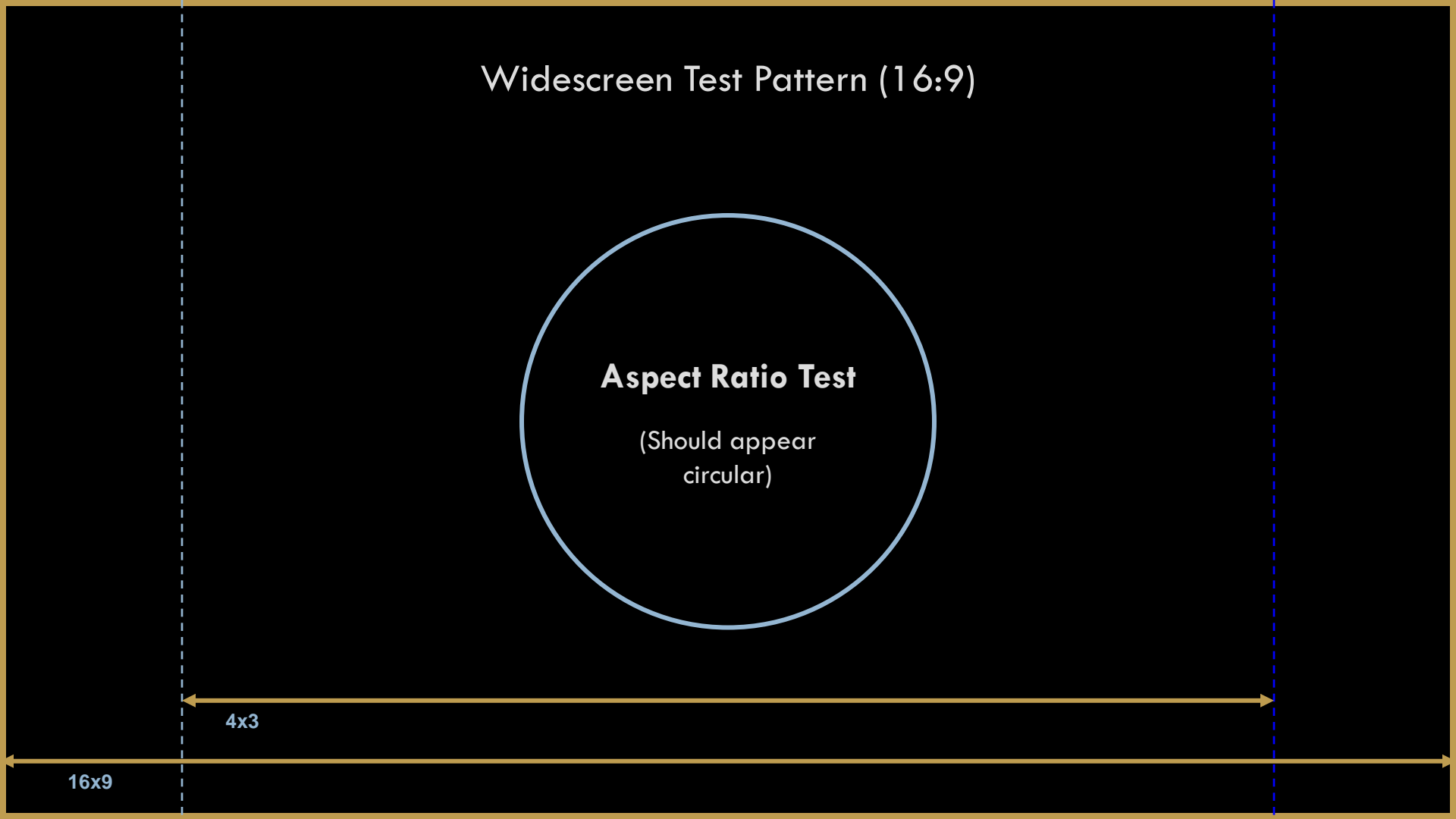
Widescreen Test Pattern (16:9)

Aspect Ratio Test

(Should appear
circular)

4x3

16x9



RYSE

SON OF ROME

Defining the 'Next'

Next-Gen

Christopher Evans





RYSE: BACKGROUND

- ❑ New team
- ❑ New hardware
- ❑ New pipelines
- ❑ 1.5 years in development
- ❑ Looming immovable deadline



RYSE:

CHARACTER TECHNOLOGY

RYSE: CHARACTER CHALLENGES

- ❑ 'Play the cutscene'
 - ❑ Universal rigs
- ❑ New Pipeline
 - ❑ First Maya project
 - ❑ Virtual Production
- ❑ Story-driven game
 - ❑ Lots of hero chars



[\[GAMEPLAY VIDEO\]](#)

RYSE: CHARACTER PIPELINE

- ❑ Modular rigging/encapsulation
 - ❑ Character, Character Part, Rig Part
 - ❑ Python-generated
- ❑ Outsourcing!
 - ❑ How to innovate?
- ❑ Scene description file format
 - ❑ Virtual production data wrangling

EXPLORE

BATCH EXPORT

TOOLBOX

RIG UPDATE / VALIDATION

☒ Show empty or missing data☒ Show short names

ITEM	VER	LATEST	MODULE
roman	4.0		
cryPed Rig Modules			
vita_armor	1.0	None	None
+ spine	1.0	1.0	fkIkSpine
+ skirt	1.0	None	skirtRig
+ roman_leatherStraps	1.0	1.0	connectRopes
locomotion_locator	1.0	1.0	locomotionLocator
+ lgnr_armor	1.0	None	None
helmet	1.0	1.0	helmet
+ head	1.0	1.0	ikHead
+ R_leg	4.0	4.0	dismemberedFkIkLeg
R_hand	1.0	1.0	genericMale_hand
R_clavicle	1.0	1.0	fkClavicle
+ R_arm	2.0	2.0	dismemberedFkIkArm
R_arm_IK			
START>> R_shoulder_Ik			
+ PV>> R_arm_PV_IK_CTRL			
+ PROCEDURAL RIGGING			
END>> R_hand_Ik			
+ L_leg	4.0	4.0	dismemberedFkIkLeg
L_hand	1.0	1.0	genericMale_hand
L_clavicle	1.0	1.0	fkClavicle
+ L_arm	2.0	2.0	dismemberedFkIkArm
TYPE: biped			
+ SPACES (12)			
+ RIG UPDATES (9)			
LOCATOR: locomotion_locator...			
+ HELPER JOINTS (25)			
GLOBAL CTRL: global_CTRL			
+ GHOST JOINTS (5)			
EXPORT ROOT: DEF:root			
+ ATTACHMENT POINTS (4)			
ANIM ROOT: ANIM_root			

REFRESH

Ignore character type: prop

roman
cry Character

Version

Anim Skeleton Root

Attachments

Char Hlp Jnts

Char Parts

Class Hlp Jnts

Classes

Export Skeleton Root

Ghost Joints

Global Ctrl

Locomotion Locator

Message

Null Spaces

Shared Hlp Jnts

Solvers

ineChain

y RigPart

Rigging

R_leg

CharPart

MARIUS ON XBOX ONE

- ❑ ~150k Triangles
- ❑ > 770 Joints
 - ❑ ~500 deforming (260 facial)
- ❑ 230 Corrective Facial Blendshapes
 - ❑ Culled by priority and distance
- ❑ Physics
 - ❑ Cloth, Leather, Armor
 - ❑ Runtime wrap-deformer



FACIAL TECH

- ❑ 8 Skinning Influences
- ❑ Normals update



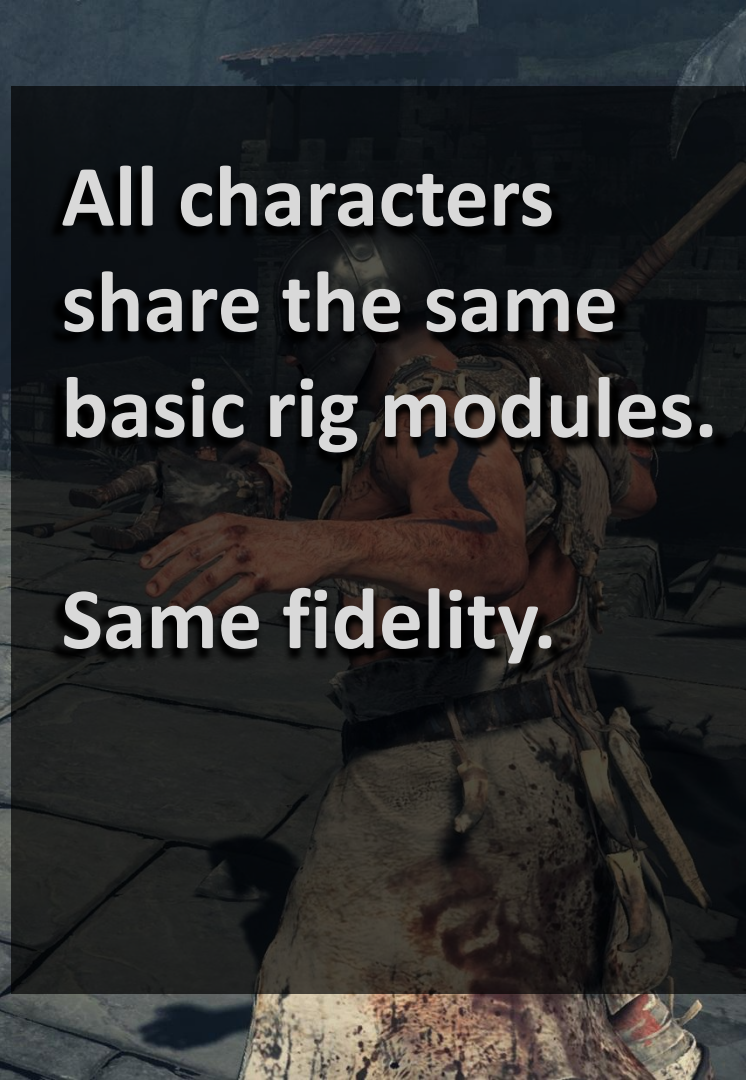
FACIAL TECH

- ❑ 8 Skinning Influences
- ❑ Normals update
- ❑ Levels of detail
 - ❑ 260 joints 230 shapes
 - ❑ 260 joints
 - ❑ 70 joints
 - ❑ <10 joints





All characters
share the same
basic rig modules.
Same fidelity.





RYSE: DESTRUCTION PIPELINE

COMPLEX DEFORMATION AND DESTRUCTION

- ❑ Most game engines take only static or skinned meshes
- ❑ Leverage new hardware to create efficient cache-based pipeline

[[GEOMCACHE VIDEO](#)]

CRYTEK 'GEOMCACHE' PIPELINE

- ❑ Imports Alembic
- ❑ No engine-specific markup
- ❑ Average filesize ~10% of the original ABC size
- ❑ Renders as efficiently as static geometry
- ❑ Lossy-to-Lossless
- ❑ Supports instancing, streaming, buffered playback

[[MAYA PIPELINE VIDEO](#)]

WHY IT MATTERS

- ❑ Allows us to iterate faster
- ❑ Focus on the art, not getting the art into the engine
- ❑ Send out work to VFX vendors
- ❑ Quickly new things [RF TEST]

TAKE AWAYS

- ❑ New hardware allows feature film practices to be used in real-time
- ❑ It's possible to switch to Maya in a production cycle
 - ❑ Even easier if your assets aren't Z-up!



THANK YOU.

SPECIAL THANKS!



TECHNICAL ART

Riham Toulan
Sascha Herfort
Harald Zlattinger
Alex Raab

PROGRAMMING

Axel Gneiting
Bogdan Coroi
Andy Rayson